Remarks

This is a complete response to the Office Action mailed July 21, 2005, which is the first rejection under the RCE. However, Applicant is greatly concerned that at this late stage in prosecution there has yet to be made a substantiated rejection on the merits of the present embodiments as claimed. This latest Office Action is no more than a twenty-seven page diatribe touching neither the merits of this case nor the law. Responding to this Office Action in order to advance the merits has been unnecessarily burdensome on the Applicant. For that reason, the Applicant has submitted herewith a request for telephone interview with the Examiner's supervisor, Mr. Decady, to be held before anyone issues the next action on the merits. Mr. Decady has agreed to participate in the interview.

The amendments to claim 15 are intended to more particularly point out and distinctly claim the implicit ordering in the steps associated with the comparing step occurring after the arranging steps.

New claims 29 and 30 are drawn more particularly to the emulation circuit of the present embodiments as opposed to a system having a digital channel and an emulation circuit. Support for new claims can be found at least in FIGS. 11 and 12 and the description related thereto.

The amendments and remarks herein are proper, are supported by the specification, and do not include new matter.

Restriction/Election Requirement

Applicant respectfully traverses the withdrawal of claim 28 because it is wholly based on an erroneous claim construction. Applicant reiterates that claim 28 is a linking claim in

means-plus form under Section 112 paragraph six. However, the Examiner misconstrued the claim by stating: "Claim 28 recites, "predicting error rate performance in relation to a selected digital data configuration...," The Examiner's construction completely ignores the language *means for predicting error rate performance*.... (Office Action of 7/21/2005, pg. 2) Despite the express prohibition against the recital of acts in a means claim according to Section 112 paragraph six, the Examiner erroneously bases the rejection on Applicant not expressly reciting the act that is recited in claim 15: "Claim 28 does not recite "comparing the output data with the input data to determine an error rate performance...." (Office Action of 7/21/2005, pg. 2)

Regardless of whether the group I and group II claims are properly divisible, which Applicant believes they are not, Claim 28 is a mean-plus format claim linking the method and apparatus of the present embodiments as claimed. As such, Applicant is entitled to its consideration on the merits as properly construed under Section 112 paragraph six. The examination in the Office Action of 7/21/2005 is incomplete because it does not consider the patentability of the invention as claimed. (37 CFR 1.104(a)) Reconsideration and reversal of the withdrawal of claim 28 are respectfully requested.

Applicant also respectfully traverses the finality of the restriction requirement between group I and group II claims because it is based, as understood, on the Examiner's misplaced understanding of the law and on a continuation of the erroneous claim construction on which the Examiner originally based the restriction requirement.

The restriction requirement is erroneous firstly because the Examiner curiously believes that he can pick language from the method claim and require that it be explicitly recited in the method claim: "This is not found persuasive because claim 1 still does not

recite, "comparing the output data with the input data to determine an error rate performance...." (Office Action of 7/21/2005, ppg. 2-3) The Examiner cites no basis in the law for this proposition because there is none. Rather, the Examiner apparently wrongly confuses different scopes of the embodiments with different inventions, supposedly as a justification to "avoid the necessity of having to consider 167,035 prior art patents." In reality, the Examiner's making final the restriction requirement appears to be based on a complete misunderstanding of the present embodiments as claimed, despite a perceived agreement reached with Applicant's representative M. McCarthy to that end in a previous telephone interview.

The restriction requirement is erroneous secondly because the Examiner still has not substantiated it according to the basis on which he relies. The Examiner originally invoked MPEP 805.05(e) and stated: "the apparatus (Group I) can be used for accessing memory whereby data is stored in a different format from what it is received." (Office Action of 6/14/2004, pg. 3) The Applicant rebutted at the time that the previously presented claim language plainly required that the error prediction is in relation to both the input and output data being of the same configuration. (Applicant's Response of 7/1/2005, ppg. 9-10) Nevertheless, Applicant amended the claim in an attempt to obviate the Examiner's concern. The amended claim recites *predict error rate performance in relation to a first of the alternative digital configurations for <u>both</u> the input data and output data and, alternatively, to a second of the alternative digital configurations for <u>both</u> the input data and output data."*

Applicant believes this claim language plainly requires that the error rate performance is predicted in relation to input data and output data of the same digital configuration. However, the Examiner does not agree:

> The newly amended claim language suffers from the deficiencies of previously examined claim language. Claim 1 still only recites that error rate is predicted in relationship to alternative digital configurations. The examiner would like to point out that this means exactly what it says that error rate is predicted in relationship to alternative digital configurations. That the alternative digital configurations are used for the input data and output data in no way demonstrates that error rate is predicted in relationship to the input data and output data since the alternative digital configurations can be applied after the prediction is made without any knowledge of the input data and output data. Furthermore, nowhere does claim 1 recite, "comparing the output data with the input data to determine an error rate performance" and hence cannot be classified in 714/719 as claim 15 is.
> (Office Action of 7/21/2005, pg. 4, emphasis added)

Applicant has been and remains open to suggestions on making the claim language more particular and distinct, but now believes the Examiner, by his comments, continues to selectively ignore the plain meaning of claim language. In fact, the Examiner's comments appear to be drifting from misplaced to nonsensical. At any rate, the Examiner's response is incomplete because it again fails to substantiate a basis for the restriction requirement under MPEP 806.05(e). Reconsideration and withdrawal of the restriction requirement are respectfully requested.

Applicant will decide after the telephone interview with Mr. Decady, if timely held, whether to exercise its option to petition the Director to intervene and review the merits of the restriction requirement.

Objection to Claim 15

Originally filed claim 15 was now, on the first rejection under the RCE, objected to for the brevity of its preamble. In doing so, the Examiner also apparently explains the reason

for the arduous prosecution history to date: "As such it is impossible to determine to what the Applicant regards as his invention." (Office Action of 7/21/2005, pg. 5)

The Applicant believes that claim 15 satisfies the statutory requirement of particularly pointing out and distinctly claiming the subject matter of the present embodiments. Examiner has not substantiated and Applicant knows of no legal basis for objecting to claim 15's preamble.

If, at this late date in prosecution, the Examiner can't possibly understand the embodiments as claimed, then Applicant suggests that it is incumbent on the Examiner to request his Supervisor transfer the case.

Reconsideration and withdrawal of the objection are respectfully requested.

Objection to Claim 27

Originally filed claim 27 was now, on the first rejection under the RCE, objected to for its form. Applicant submits that claim 27 is clearly a dependent claim of 15, and is in proper form. However, in order to reduce the unresolved issues in this case, and solely in order to move this case forward on the merits, Applicant has canceled claim 27 without prejudice.

Rejection Under Section 112 First Paragraph

Claims 15-27 were rejected for lacking an enabling disclosure. This rejection is respectfully traversed.

Because of the perceived breadth of the claims, the Examiner apparently wrongfully wants to incorporate limitations from the specification in construing them. For example, the Examiner's asserted legal basis for lack of enablement is misplaced: "That is, the Applicant

fails to teach every conceivable interpretation for claim 15." (Office Action of 7/21/2005, pg. 7) Also, the Examiner's following statement about the present embodiments is misplaced: "The Examiner would like to point out that the Applicant's specification only teaches arranging the input data into a selected ECC and RLL configurations from a plurality of different selectable ECC and RLL configurations to predict error rate performance of different selectable ECC and RLL configurations." (Office Action of 7/21/2005, pg. 7)

The correct standard for applying the enablement requirement is that the specification must teach those skilled in the art how to make and use the claimed invention without undue experimentation. *In re Wright*, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). The skilled artisan would readily recognize from FIGS. 11 and 12, for example, that in some embodiments the input data and output data are stored in memory in blocks 322, 324, respectively, according to a desired RLL encoding. The input and output data can be selectively arranged according to symbol length and interleaves and stored in memory in blocks 342, 344, respectively. The counter 348 then can determine the error rate performance, based on a preselected ECC capability, in relation to a selected digital configuration for both the input data and output data by comparing the correspondingly arranged data stored in memory in blocks 342 and 344. This example is illustrative and not limiting of the scope of the present embodiments, as one might change the type or order of selected digital configurations from an available plurality of selectable digital configuration in arranging the input and output data.

The Applicant traverses the present rejection because the specification clearly enables a skilled artisan to make and use the invention as claimed without undue experimentation. Reconsideration and withdrawal of the present rejection of claim 15 and the claims depending therefrom are respectfully requested.

Rejection Under Section 112 Second Paragraph

Claims 16-27 were each rejected for indefiniteness (Office Action of 7/21/2005 ppg. 8-11), and each rejected for omitting essential elements amounting to a gap between the elements (Office Action of 7/21/2005 ppg. 12-14), and each rejected for omitting essential elements amounting to a gap between the steps (Office Action of 7/21/2005 ppg. 15-17).

The bases for all these rejections is unclear to Applicant. Phone messages left by M. McCarthy in attempts to discuss the rejections with the Examiner were not returned. It appears that the underlying basis for the rejections is either a matter of form, or a matter of the Examiner not understanding the present embodiments as claimed, or both.

If the underlying reason for all these rejections is a matter of form, then Applicant is open to suggestions for replacing the alleged indefinite terms such as *characterized by, based on, in relation to,* and *to reflect,* with terms agreeable with the Examiner to obviate the rejections. However, it is an undue hardship on the Applicant's prosecution history record to amend claims based only on speculation as to the reason for the rejections. Because the reason for these rejections may only be a matter of form in part or in whole, and because the rejected claims are not independent claims, the Applicant respectfully requests that these rejections be held in abeyance until the patentability of the dependent claims is determined, or at least until such time that the reasoning can be explained such that the Applicant can respond without speculation.

However, Applicant believes the underlying reason for all these rejections is more likely because the Examiner simply does not understand the present embodiments as claimed. Recall that the Examiner has admitted "As such it is impossible to determine to

what the Applicant regards as his invention," (Office Action of 7/21/2005 pg. 5 and ppg. 6-7) For example, the first rejection states: "The terms "**characterized by**" and "**based on**" are indefinite since 1) it is not clear what the relationship between "the comparing step" and "a first error correction code (ECC) encoding methodology" is, and 2) it is not clear what the relationship between a "first error correction code (ECC) encoding methodology" and "the selected digital configuration" is. Apparently the Examiner does not understand that in some embodiments the input data and output data, both arranged in a selected digital configuration, are compared to determine an error count, and the error count is analyzed in relation to a preselected ECC capability in determining performance. However, it is likewise an undue hardship on Applicant's prosecution history record to characterize the present embodiments in terms of illustrative embodiments, in response to the Examiner's plethora of indefiniteness rejections which, on their face, evidence that the Examiner plainly does not understand the present embodiments as claimed. Because the Examiner's Supervisor has agreed to an interview regarding the merits of this case after receipt of this response, and because the rejected claims are not independent claims, the Applicant respectfully requests that the present rejections be held in abeyance until the patentability of the independent claims is determined, or at least until such time that the reasoning can be explained such that the Applicant can respond without speculation.

Rejection Under Section 102

Claims 15-20 and 24-27 were rejected as being anticipated by Shikakura '182. This rejection is respectfully traversed.

Claim 15

Shikakura '182 cannot sustain a Section 102 rejection because it fails to identically disclose all the features of the present embodiments as recited by claim 15 which include at least the following:

> *arranging the input data into a selected digital configuration from a plurality of different selectable digital configurations;*
> *arranging the output data into the selected digital configuration; and*
> *comparing the output data arranged in the selected digital configuration with the input data arranged in the selected digital configuration to determine an error rate performance.*
> (excerpt of claim 15, emphasis added)

The present embodiments as claimed comprises *arranging the input data into a selected digital configuration from a plurality of different selectable digital configurations...arranging the output data into the selected digital configuration...comparing the output data arranged in the selected digital configuration...with the input data arranged in the selected digital configuration....*

Shikakura '182 discloses receiving a digital data word train from input terminal 30 that is of a predetermined fixed digital configuration with respect to ECC. The input data is demodulated to provide a code train that is subjected to the syndrome calculation block 34, which executes a syndrome calculation for the ECC. A detection means comprising syndrome decision block 44 and counter 46 calculate an error code rate based on a number of syndromes detected per preselected unit of time. A selection means 48 is responsive to the error code rate from the detection means 44, 46 in order to apply a selectable mode for ECC decoding. This permits Shikakura '182 to operate in a correctable mode whereby ECC decoding is applied when the error rate doesn't exceed the ECC capability, and to switch to

an uncorrectable mode when the error rate exceeds the ECC capability. (see, for example, Shikakura '182 col. 3 lines 42-67) This permits the continued transmission of data even when the error rate is relatively high but not particularly damaging, such as in the described use in streaming video data.

However, the Examiner erroneously reads the selection means 48 of Shikakura '182 onto both the recited *arranging the input data* and the *arranging the output data* steps of the present embodiments as claimed: "col. 2 lines 29-34 in Shikakura teaches that the input data as well as the output data is arranged into the selected digital configuration so that the selected digital configured error correction code can be decoded to remove errors...." (Office Action of 7/21/2005, pg. 18)

The Examiner's construction is erroneous firstly because it plainly ignores that Shikakura '182 explicitly defines the input data 30 as having a predetermined fixed digital configuration with respect to ECC. That is, Shikakura '182 is wholly silent regarding *arranging the input data into a selected digital configuration from a plurality of different selectable digital configurations*. Furthermore, it is implausible to read the selection means 48 onto both the *arranging input data* and *arranging output data* steps. Shikakura '182 explicitly defines the detection means 44, 46 as being responsive to the input data 30, and the selection means 48 as being responsive to the detection means 44, 46. This is evident even within the portion of Shikakura '182 that the Examiner relies: "(d) selection means responsive to an output from said detection means...." (Shikakura '182 col. 2 lines 29-30)

The Examiner also erroneously reads the substantial effect of the syndrome calculation onto the recited *comparing the output data arranged in the selected digital configuration... with the input data arranged in the selected digital configuration* step of the

present embodiments as claimed: "hence a syndrome is substantially a comparison result indicating that the output data matches the input data when the syndrome is zero and indicating that the output data does not match the input data when the syndrome is not zero." (Office Action of 7/21/2005, pg. 19, emphasis added) The Examiner's construction is erroneous at least because it plainly ignores that Shikakura '182 is wholly silent regarding comparing anything to the input data 30, but rather attempts to substitute a substantial effect of a different arrangement that explicitly discloses not *comparing the output data...with the input data.* Even within the perceivable broadest reasonable construction, Shikakura '182 is wholly silent regarding comparing the data associated with any functional output with the data of its respective input in order to predict write/read error rate performance.

The Applicant is entitled to a patent unless the Examiner can substantiate a rejection based on anticipation or unpatentability. (35 USC 102) No such rejection has been substantiated here, in that the Examiner's claim term construction is unreasonable because it ignores both plain meaning of claim terms and explicit definitions of the claim terms in the specification. *In re Morris*, 43 USPQ2d 1753 (Fed. Cir. 1997). Shikakura '182 cannot sustain a Section 102 rejection because it does not identically disclose all the embodiments of the present invention as claimed. Furthermore, even though this arduous prosecution has progressed to the first rejection under the RCE, no complete examination has occurred yet with respect to the patentability of the invention as claimed. (37 CFR 1.104(a)) Reconsideration and withdrawal of the present rejection of claim 15 and the claims depending therefrom are respectfully requested.

Rejection Under Section 103

Claims 21 and 22 were rejected as being unpatentable over Shikakura '182 in view of Reed '198. This rejection is respectfully traversed because Applicant expressly traverses the Examiner's contention that "Shikakura substantially teaches the claimed invention described in claims 15-20, 23 and 24" (Office Action of 7/21/2005, pg. 23) for reasons above, and because these are dependent claims of an allowable independent claim that provide additional limitations thereto. Reconsideration and withdrawal of the present rejection are respectfully requested.

Rejection Under Section 103

Claim 23 was rejected as being unpatentable over Shikakura '182 in view of Schachner '730. This rejection is respectfully traversed because Applicant expressly traverses the Examiner's contention that "Shikakura substantially teaches the claimed invention described in claims 15-20" (Office Action of 7/21/2005, pg. 25) for reasons above, and because this is a dependent claim of an allowable independent claim that provides additional limitations thereto. Reconsideration and withdrawal of the present rejection are respectfully requested.

Conclusion

This is a complete response to the Office Action of 7/21/2005.

The Applicant has filed herewith a request for telephone interview with the Examiner's supervisor, Mr. Decady, to be held before anyone issues the next action on the merits. This interview is necessary in order to resolve issues that have prevented a first complete

examination from occurring even at this late stage of prosecution.

The Applicant respectfully requests that all of the pending claims be passed to issuance.

Respectfully submitted,

By: _____

Mitchell K. McCarthy, Registration No. 38,794
Randall K. McCarthy, Registration No. 39,297
Fellers, Snider, Blankenship, Bailey and Tippens
100 N. Broadway, Suite 1700
Oklahoma City, Oklahoma 73102
Telephone: (405) 232-0621
Facsimile: (405) 232-9659
Customer No. 33900